

I claim:

Sub A¹⁰ 1. A system for integrating data representing at least one weather parameter prevailing at at least a first geographic location into a television broadcast related to the first geographic location, the system comprising:

5 at least one monitoring station located at the first geographic location, the monitoring station including:

means for sensing the weather parameter, the sensing means being adapted to generate a weather parameter signal representing the weather parameter; and means for transmitting the weather parameter signal from the monitoring station;

10 a base station including:

means for receiving the weather parameter signal from the monitoring station and providing the weather parameter signal to the base station;
means for generating an icon signal representing a weather parameter icon in response to the weather parameter signal, the weather parameter icon representing the weather parameter sensed at the first geographic location; and means for converting the icon signal into a television signal representing the weather parameter, the television signal being in a format suitable for integration into the television broadcast.

20 2. The system of claim 1, wherein the sensing means includes means for sensing a wind direction prevailing at the first geographic location and for generating a wind direction signal representing the wind direction.

3. The system of claim 2, wherein the wind direction sensing means is a wind vane.

4. The system of claim 1, wherein the sensing means includes means for sensing a wind speed prevailing at the first geographic location and for generating a wind speed signal representing the wind speed.

25 5. The system of claim 4, wherein the wind speed sensing means is an anemometer.

6. The system of claim 1, wherein the monitoring station includes a microcontroller coupled to receive the weather parameter signal from the sensing means, and wherein the transmitting means includes a modem coupled to the microcontroller to transmit the wind direction signal from the monitoring station.

7. The system of claim 1, wherein the means for receiving the weather parameter signal is a modem coupled to communicate with the monitoring station.

8. The system of claim 2, wherein the generating means is responsive to the wind direction signal to create a wind direction icon signal representing a wind direction icon.

9. The system of claim 4, wherein the generating means is responsive to the wind speed signal to create a wind speed icon signal representing a wind speed icon.

10. The system of claim 1, further comprising means for merging the icon signal with an input television signal representing the television broadcast related to the first geographic location, the merging means producing an output television signal representing the weather parameter icon superimposed on the input television signal.

11. A system for integrating data representing a wind direction and a wind speed prevailing at at least a first geographic location into a television broadcast related to the first geographic location, the system comprising:

at least one monitoring station located at the first geographic location, the monitoring station including:

means for sensing the wind direction prevailing at the first geographic location, the wind direction sensing means being adapted to generate a wind direction signal;

means for sensing the wind speed prevailing at the first geographic location, the wind speed sensing means being adapted to generate a wind speed signal; and

means for transmitting the wind speed signal and the wind direction signal from the monitoring station;

a base station including:

means for receiving the wind speed signal and the wind direction signal from the monitoring station and providing the wind speed and wind direction signals to the base station;

means, responsive to the wind speed signal, for generating a wind speed icon signal representing a wind speed icon, the wind speed icon representing the wind speed prevailing at the first geographic location;

means, responsive to the wind direction signal, for generating a wind direction icon signal representing a wind direction icon, the wind direction icon representing the wind direction prevailing at the first geographic location; and

means for converting the wind speed icon signal and the wind direction icon signal into respective television signals representing the wind direction and the wind speed, the television signal being in a format suitable for integration into the television broadcast.

12. The system of claim 11, further comprising means for merging an input television signal with the wind direction icon signal and the wind speed icon signal, the merging means producing an output signal representing the wind speed icon and the wind direction icon superimposed on the television broadcast.

13. The system of claim 11, further comprising at least a further monitoring station located at a further geographic location, the second monitoring station including:

further means for sensing a further wind direction prevailing at the further geographic location, the further wind direction sensing means being adapted to generate a further wind direction signal;

further means for sensing a further wind speed prevailing at the further geographic location, the further wind speed sensing means being adapted to generate a further wind speed signal; and

further means for transmitting the further wind speed signal and the further wind direction signal from the further monitoring station.

14. The system of claim 13, wherein:

the means for receiving the wind speed signal and the wind direction signal from the monitoring station is adapted to receive the further wind speed signal and the further wind direction signal from the further monitoring station;

the means for generating the wind speed icon signal is responsive to the further wind speed signal to create a further wind speed icon signal representing a further wind speed icon, the further wind speed icon representing the further wind speed prevailing at the further geographic location;

the means for generating the wind direction icon signal is responsive to the further wind direction signal to create a further wind direction icon signal representing a further wind direction icon, the further wind direction icon representing the further wind direction prevailing at the further geographic location;

the means for receiving the input television signal is adapted to receive a further television broadcast related to the further geographic location; and

the merging means are adapted to merge the further television broadcast with the further wind direction icon signal and the further wind speed icon signal, the merging means producing a further output signal representing the further wind speed icon and the further wind direction icon superimposed on the further television broadcast.

15. The system of claim 11, wherein the means for generating the wind direction icon signal is adapted to create a wind direction icon signal representing a wind direction icon having an orientation that varies in response to the wind direction signal.

16. The system of claim 11, wherein the means for generating the wind speed icon signal is adapted to create a wind speed icon signal representing a wind speed icon having a physical characteristic that varies in response to the wind speed signal.

17. The system of claim 11, further comprising a communications network coupling the transmitting means of the monitoring station with the wind speed and wind direction receiving means of the base station.

18. The system of claim 17, wherein the communications network is a cellular communications network.

19. The system of claim 17, wherein the communications network is a UHF radio communications network.

5 20. The system of claim 11, wherein the wind speed sensing means is an anemometer.

21. The system of claim 11, wherein the wind direction sensing means is a wind vane.

22. The system of claim 11, wherein the transmitting means is a modem.

23. The system of claim 11, further comprising a microcontroller coupled to the wind direction and wind speed sensing means and the transmitting means to control the operation of both.

24. The system of claim 23, wherein the microcontroller is adapted to provide a user interface to the monitoring station.

25. The system of claim 11, wherein the means for receiving the wind speed signal and the wind direction signal is a modem.

15 26. The system of claim 11, wherein the icon generating means is a specially-programmed general purpose computer.

27. The system of claim 11, wherein the television signal receiving means is a graphics interface card.

20 28. The system of claim 11, wherein the merging means is a specially-programmed general purpose computer.

29. A system for integrating data representing a wind direction and a wind speed prevailing at at least a first geographic location into a television broadcast related to the first geographic location, the system comprising:

at least one monitoring station located at the geographic location, the monitoring station including:

an anemometer adapted to sense the wind speed prevailing at the first geographic location and to generate a wind speed signal representing the wind speed;

a wind vane adapted to sense the wind direction prevailing at the first geographic location and to generate a wind direction signal representing the wind direction; and

a first modem coupled to the anemometer and the wind vane to receive the wind direction signal and the wind speed signal and adapted to transmit the wind direction signal and the wind speed signal from the monitoring station;

a base station including:

at least one further modem communicating with the first modem to receive the wind direction signal and the wind speed signal from the monitoring station;

a graphics interface card coupled to receive an input television signal representing the television broadcast; and

a computer being coupled to the further modem and being programmed to create a wind direction icon signal representing a wind direction icon in response to the wind direction signal and a wind speed icon signal representing a wind speed icon in response to the wind speed signal, the computer being coupled to the graphics interface card and being programmed to merge the input television signal from the graphics interface card with the wind direction icon signal and a wind speed icon signal so that the wind direction icon and the wind speed icon are superimposed on the television broadcast.

30. The system of claim 29, further comprising at least a further monitoring station located at a further geographic location, the further monitoring station including:

a further anemometer adapted to sense a further wind speed prevailing at the further geographic location and to generate a further wind speed signal representing the further wind speed;

a further wind vane adapted to sense a further wind direction prevailing at the further geographic location and to generate a further wind direction signal representing the further wind direction; and

a third modem coupled to the further anemometer and the further wind vane to receive the further wind direction signal and the further wind speed signal and

being adapted to transmit the further wind direction signal and the further wind speed signal from the further monitoring station.

31. A method for integrating data representing a weather parameter prevailing at at least a first geographic location into a television broadcast related to the first geographic location, the method comprising the steps of:

sampling the weather parameter prevailing at the first geographic location;
 generating at least one signal representing the weather parameter;
 communicating the signal from the first geographic location;
 generating a graphic icon signal representing a graphic icon representing the weather parameter signal;
 receiving an input television signal representing the television broadcast related to the first geographic location; and
 merging the input television signal with the graphic icon signal so that the weather parameter icon is superimposed on the television broadcast related to the first geographic location.

32. The method of claim 31, wherein the step of:

sampling the weather parameter includes sampling at least one of a wind speed and a wind direction prevailing at the first geographic location;
 generating at least one signal includes generating a respective signal representing at least one of the wind speed and the wind direction;
 communicating the signal includes communicating at least the respective signal;
 generating a graphic icon signal includes generating a respective graphic icon signal representing respective icons corresponding to the wind direction and the wind speed;
 and

merging the input television signal includes merging the respective graphic icon signal with the input television signal.

33. The method of claim 31, further comprising the steps of:

sensing a further wind direction and a further wind speed prevailing at a further geographic location;

generating further respective signals representing the further wind direction and the further wind speed;

5 transmitting the further respective signals representing the further wind direction and the further wind speed;

receiving the further respective signals representing the further wind direction and the further wind speed;

generating a further wind speed icon signal representing a further wind speed icon corresponding to the further wind speed signal, and a further wind direction icon signal representing a further wind direction icon corresponding to the further wind direction signal;

receiving a further input television signal representing a further television broadcast related to a further geographic location; and

15 merging the further input television signal with the further wind speed icon signal and the further wind direction icon signal so that the further wind speed icon and the further wind direction icon are superimposed on the further television broadcast related to the further geographic location.